SQUIRE, SANDERS & DEMPSEY L.L.P.

1201 Pennsylvania Avenue, N.W.
P.O. Box 407
Washington, DC 20044-0407

Office: +1.202.626.6600
Fax: +1.202.626.6780

Direct Dial: +1.202.626.6216
rkelly@ssd.com

SQUIRE SANDERS | LEGAL COUNSEL WORLDWIDE

October 18, 2005

FILED ELECTRONICALLY

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: ARINC Incorporated's Clarification of Service Channel Authorizations and Further Suggestion Regarding Use Consistency in the Dedicated Short Range Communications Service Rules (WT Docket No. 01-90)

Dear Ms. Dortch:

ARINC Incorporated ("ARINC"), by its counsel, hereby submits this *ex parte* letter with a clarification and further discussion regarding suggested revisions to the licensing and site registration process of the Dedicated Short Range Communications ("DSRC") service in the 5.850-5.925 GHz band ("5.9 GHz Band").

On September 2, 2004, ARINC filed with the Commission its Petition for Reconsideration and/or Clarification regarding the adopted DSRC licensing and service rules ("Petition").[1] Subsequently, on August 5, 2005, ARINC filed an *ex parte* submission with the Commission to further explain and refresh the public record regarding the need for and benefits of the proposed revisions to the DSRC licensing and service rules, in particular for a Site Registration Manager to oversee the DSRC site registration process ("*Ex Parte* Submission").[2] ARINC submits this letter to the Commission's record for the DSRC proceeding (WT Docket No. 01-90) regarding two issues discussed in its Petition and *Ex Parte* Submission.

[1] Petition for Reconsideration and/or Clarification of ARINC Incorporated, WT Docket No. 01-90 (filed Sept. 2, 2004) ("Petition").

[2] *Ex Parte* Submission of ARINC Incorporated, WT Docket No. 01-90 (filed Aug. 5, 2005) ("*Ex Parte* Submission").

First, on page 7 of its *Ex Parte* Submission, ARINC stated that "[p]roposed revisions to the ASTM DSRC Standard[3] contemplate that each RSU [Roadside Unit] would be authorized to operate on the Control Channel and only one Service Channel…." After discussions with the DSRC community, ARINC believes that this wording requires clarification. ARINC did not intend to suggest that an RSU could not be registered to operate on more than one Service Channel. Nor did ARINC intend to suggest that an RSU could not operate on different Service Channels at different times and, as technology progresses, operate on multiple channels simultaneously. The contemplated updates to the ASTM DSRC Standard and its supporting IEEE standards do not foreclose an RSU from operating on more than one Service Channel. ARINC does believe, however, that each applicant for site registration should be required to make a showing as to which and how many Service Channels are needed consistent with the DSRC service(s) identified in its "DSRC Use Eligibility Statement," as proposed herein, and the RF environment of the site in question.[4] ARINC maintains that a Site Registration Manager would be in the best position to determine the Service Channel or Channels that are most appropriate for the intended service(s) and the proposed site.[5]

Second, ARINC noted in its Petition that the licensing and service rules do not include a mechanism to confirm that an applicant intends to provide a service that is consistent with the DSRC rules.[6] To this end, ARINC noted that identification of inconsistent operations will occur only after such systems are operational and a complaint is brought before the Commission.[7] ARINC therefore proposed that a DSRC license applicant would have to make a showing that its proposed service qualifies as a DSRC service and will comply with the Commission's rules and the required ASTM DSRC Standard.[8] In its subsequent *Ex Parte* Submission, ARINC further suggested that automated software functions implemented to support the site registration process could be also used to ensure that intended uses are consistent with the DSRC service definition (47 C.F.R. § 90.7) and the ASTM DSRC Standard.[9]

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[3] American Society of Testing and Materials (ASTM) Standard Specification for Telecommunications and Information Exchange Between Roadside and Vehicle Systems – 5 GHz Band Dedicated Short Range Communications (DSRC) Medium Access Control (MAC) and Physical Layer (PHY) specifications, Designation, E 2213-02 (published September 2003) ("ASTM DSRC Standard")

[4] *See Ex Parte* Submission at 7-8 n.16.

[5] In this context, ARINC reiterates its earlier proposals that Service Channel 172 should be designated only for high-availability, low-latency safety communications and Service Channel 184 should be designated only for coordinated longer-range, high-power communications conducted by public safety licensees.

[6] Petition at 8.

[7] *Id.*

[8] *Id.* At 9.

[9] *Ex Parte* Submission at 9 n.17.

The DSRC rules provide significant flexibility for licensees to provide a wide variety of services, many of which are as yet unknown. The service definition and the ASTM DSRC Standard, however, define the two critical use limitations that all DSRC services must follow. The DSRC service definition adopted by the Commission defines DSRC as:

> The use of radio techniques to transfer information over short distances between roadside and mobile radio units, between mobile units, and between portable and mobile units to perform operations related to the improvement of traffic flow, traffic safety and other intelligent transportation service applications in a variety of environments. DSRC systems may also transmit status and instructional messages related to the units involved.[10]

This definition is purposefully – and appropriately – broad. Public safety, private and commercial services may be provided, so long as they relate to the improvement of traffic safety, traffic efficiencies and other "intelligent transportation safety service applications." Messages can be voice or data, stored for later play or real-time, but they can only be transmitted from vehicle to vehicle or from vehicles to the roadside – not permitted, however, are roadside to roadside communications or those between the roadside and a system network, or other point-to-point fixed communications.

DSRC is a new and developing wireless service. The minimal restrictions in the DSRC service definition and required compliance with the DSRC Standard are appropriate and necessary to ensure that an already complicated RF environment does not become unmanageable because of non-conforming uses. DSRC also includes critical safety and public safety services, a characteristic that further supports the need to take steps to identify potential non-conforming uses.

Since the filing of its *Ex Parte* Submission, ARINC has considered further the issue of DSRC use consistency. In particular, ARINC notes that the DSRC-specific licensing forms (FCC Forms 601 and its Schedule M) do not include any requirement that a licensee describe or otherwise identify its proposed service and how it is consistent with the DSRC rule requirements. ARINC therefore proposes that the DSRC licensing procedures include a requirement that applicants describe their proposed DSRC use.

ARINC proposes that DSRC licensees be required to provide an "eligibility statement" regarding their proposed DSRC use or uses when applying to register an RSU for a particular site. To implement this requirement, ARINC further proposes that Schedule M be amended to include a new Box #53 under a new section labeled, "DSRC Use Eligibility Statement." Box #53 would state: "Please provide a short statement describing the intended use(s) of this RSU in the provision of a DSRC service(s)." Sample responses could include but are not limited to:

- This RSU will be used to provide intersection collision avoidance services;
- This RSU will be used for electronic toll collection services; or
- This RSU will be used for parking payment services.

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[10] 47 C.F.R. § 90.7.

Certain uses, such as those listed above, have already been identified as likely types of DSRC uses. The list of candidate DSRC uses, however, is not exhaustive. Other types of uses not yet envisioned may properly qualify as DSRC in the future.[11] In these instances, the applicant may need to provide additional information describing the intended use and how it consists of "operations related to the improvement of traffic flow, traffic safety and other intelligent transportation service applications."

ARINC believes that requiring such an "eligibility statement" would help to ensure that only qualifying DSRC services will be provided in the 5.9 GHz Band. This modest, up-front step would greatly reduce the potential cost and time to bring such systems into compliance. It would give the Commission a mechanism to identify non-conforming uses before systems are deployed. The DSRC industry would also be able to advise the Commission of non-conforming uses of the 5.9 GHz Band by comparing actual operations with the use consistency statement. The proposed statement would thus conserve Commission resources and promote administrative efficiency in the implementation of the DSRC service rules.

Should there be any questions regarding this filing, please do not hesitate to contact me.

Sincerely,

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Robert B. Kelly

cc: Michael Wilhelm, Federal Communications Commission (via e-mail)
Herb Zeiler, Federal Communications Commission (via e-mail)
Tim Maguire, Federal Communications Commission (via e-mail)
Jeannie Benfaida, Federal Communications Commission (via e-mail)

[11] For this reason, ARINC does not suggest that applicants identify a DSRC use from any established list.